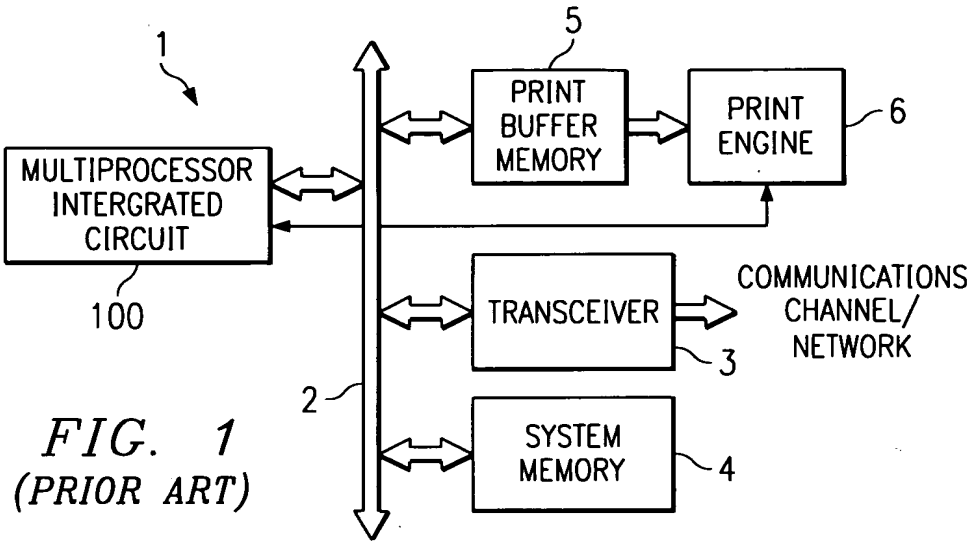


FIG. 1
(PRIOR ART)

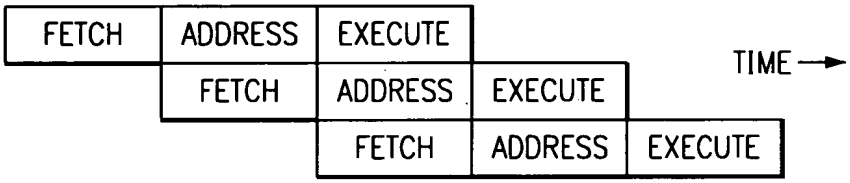


FIG. 4
(PRIOR ART)

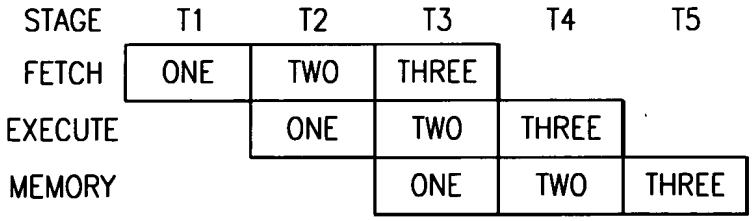


FIG. 6
(PRIOR ART)

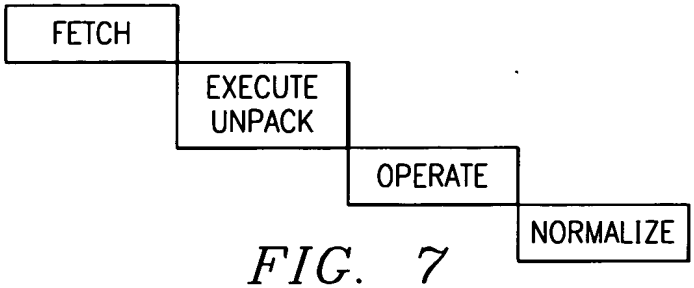


FIG. 7
(PRIOR ART)

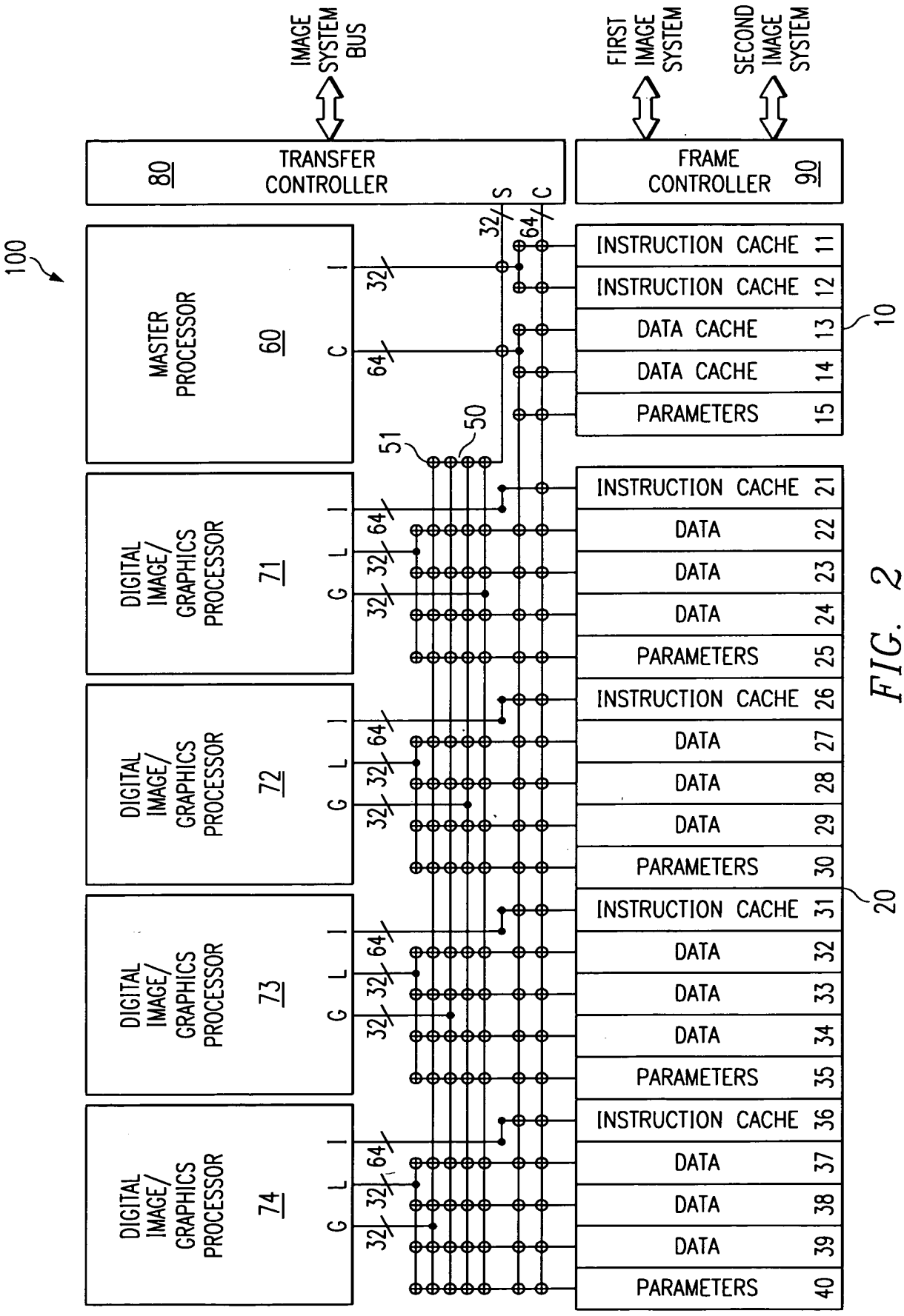


FIG. 2
(PRIOR ART)

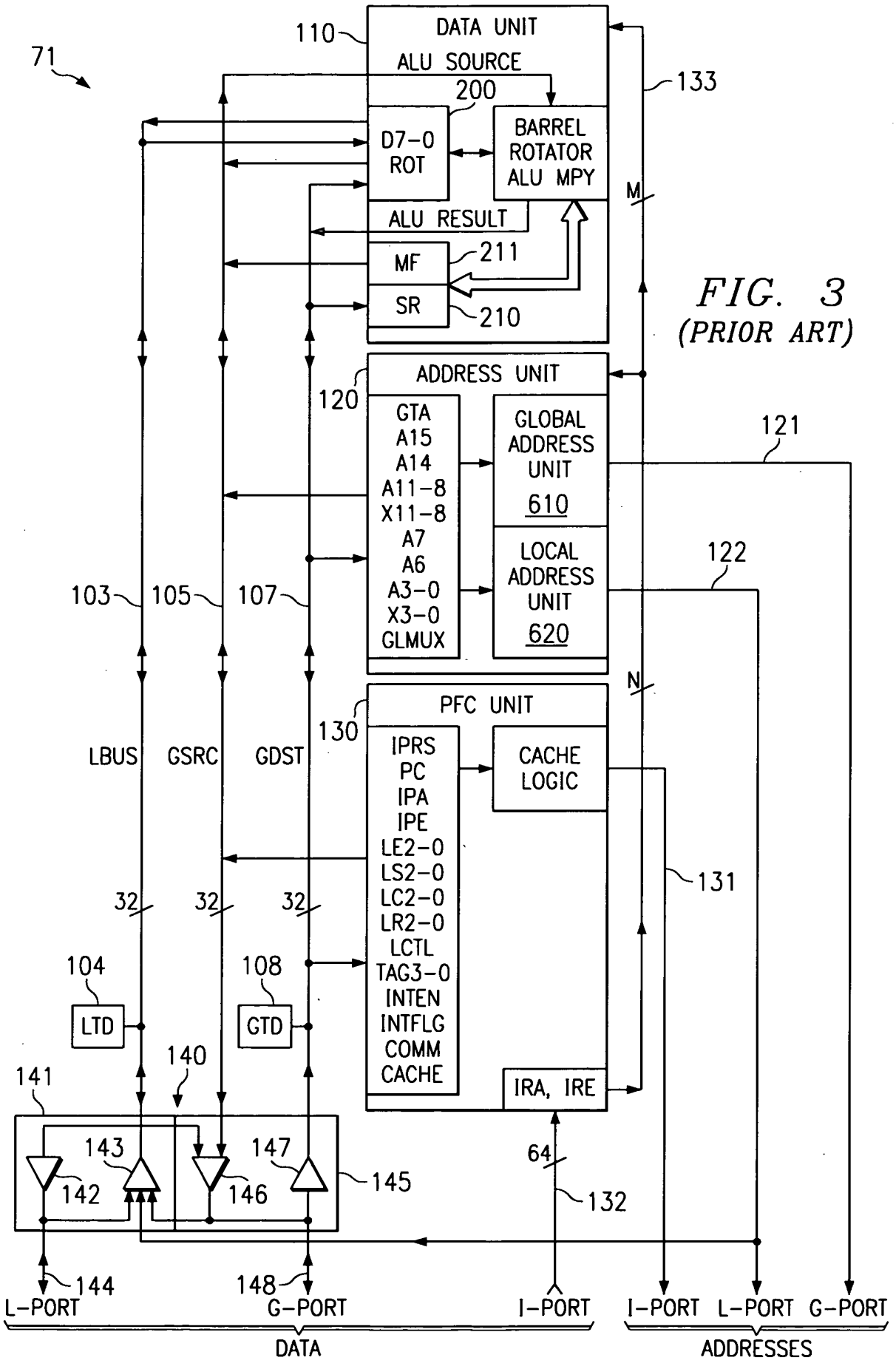


FIG. 3
(PRIOR ART)

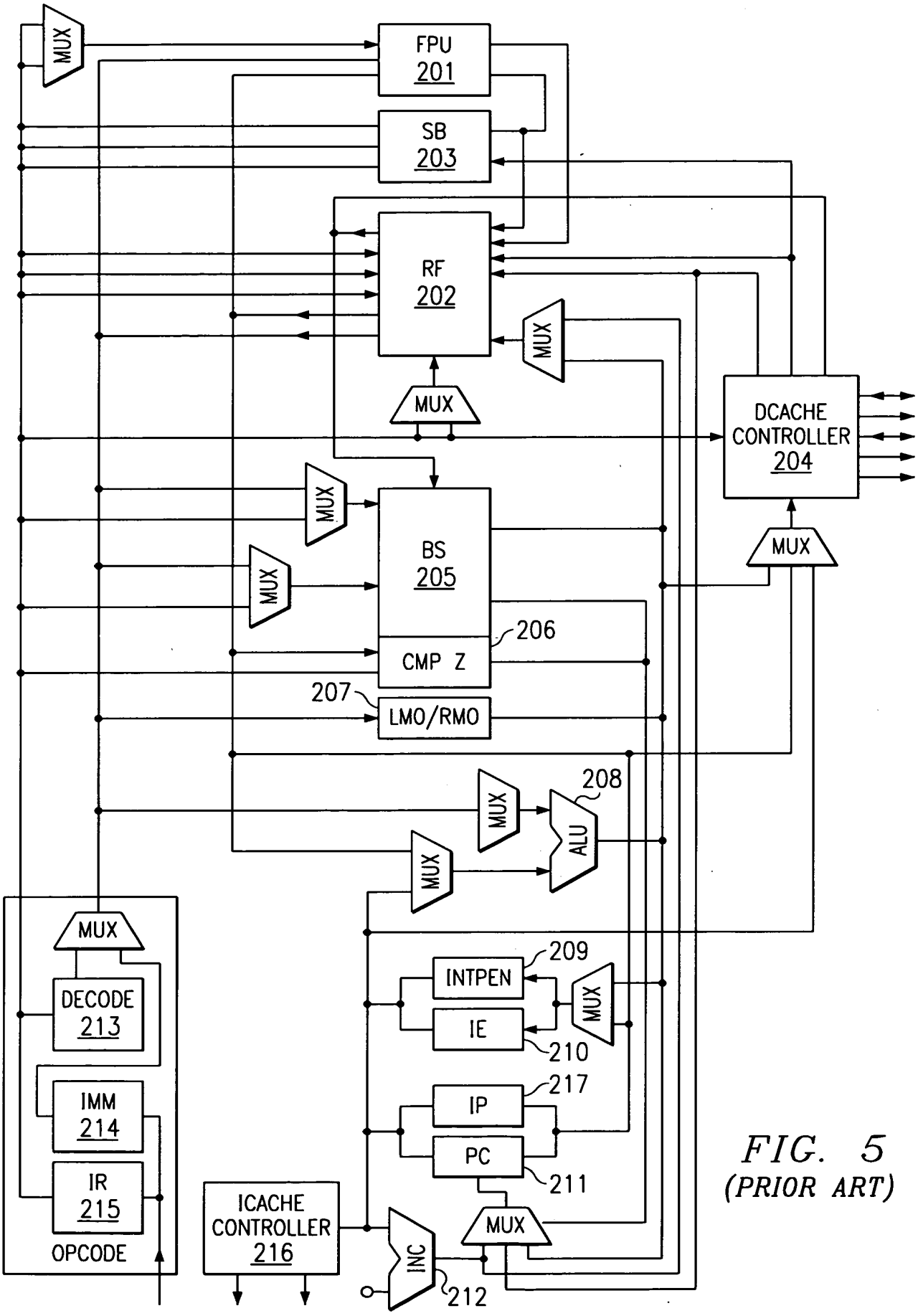


FIG. 5
(PRIOR ART)

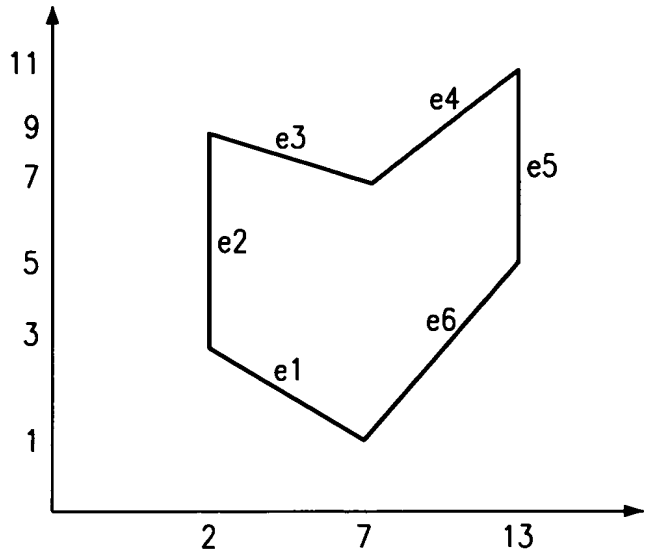


FIG. 8

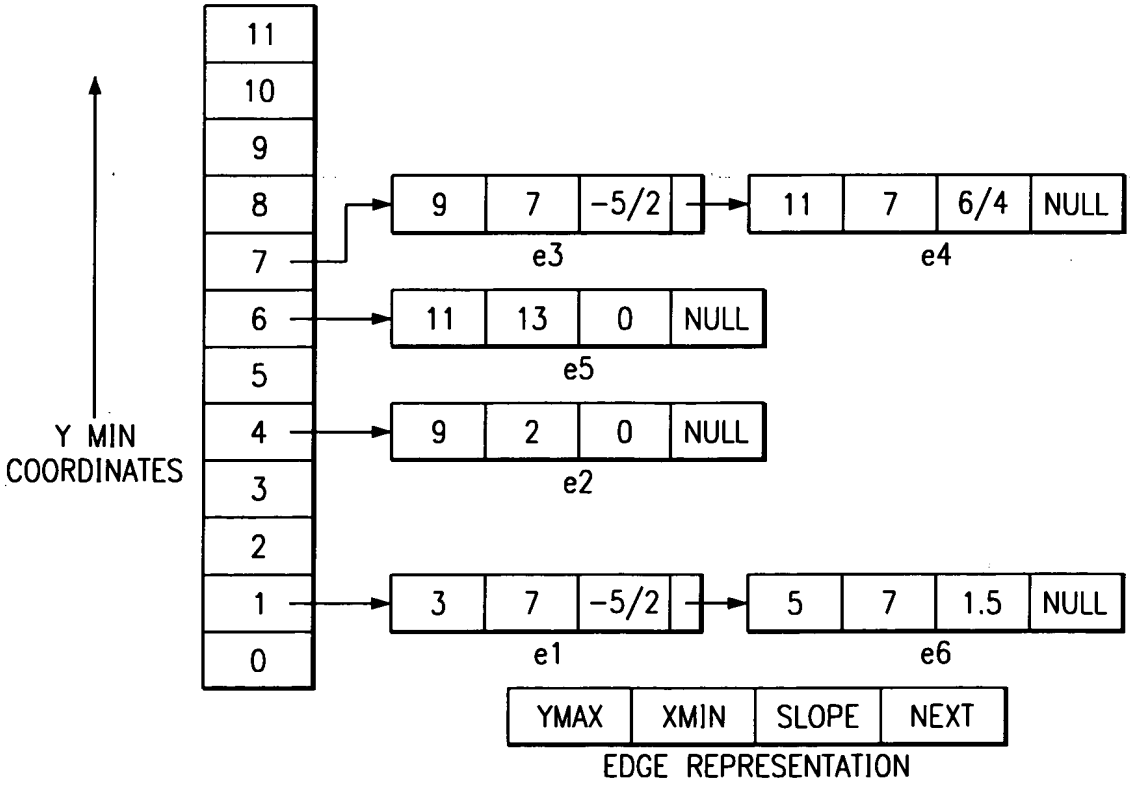


FIG. 9
(PRIOR ART)

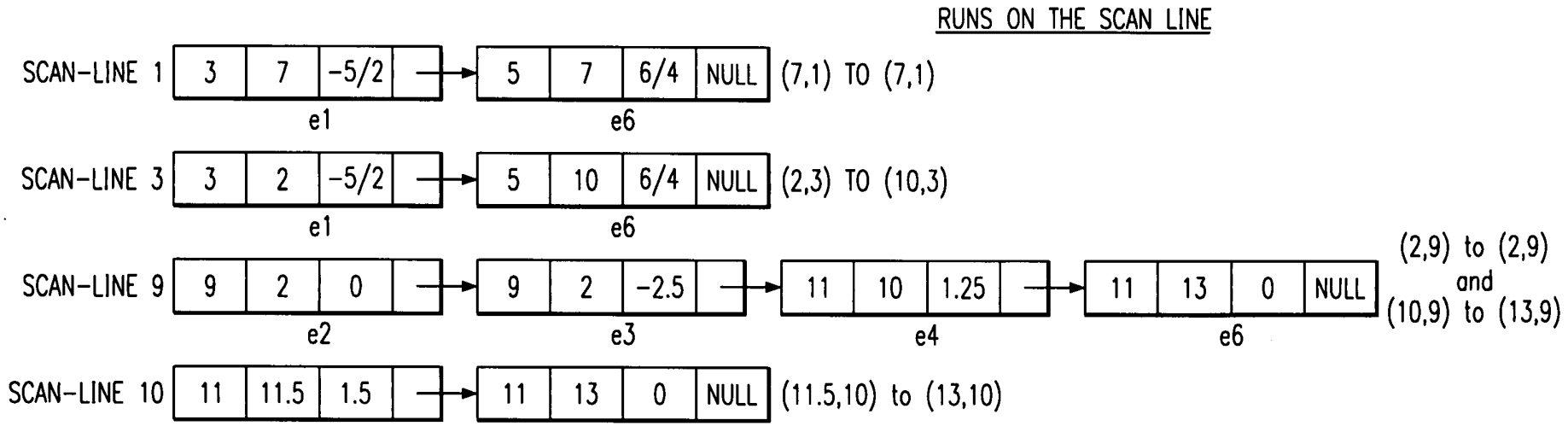


FIG. 10
(PRIOR ART)

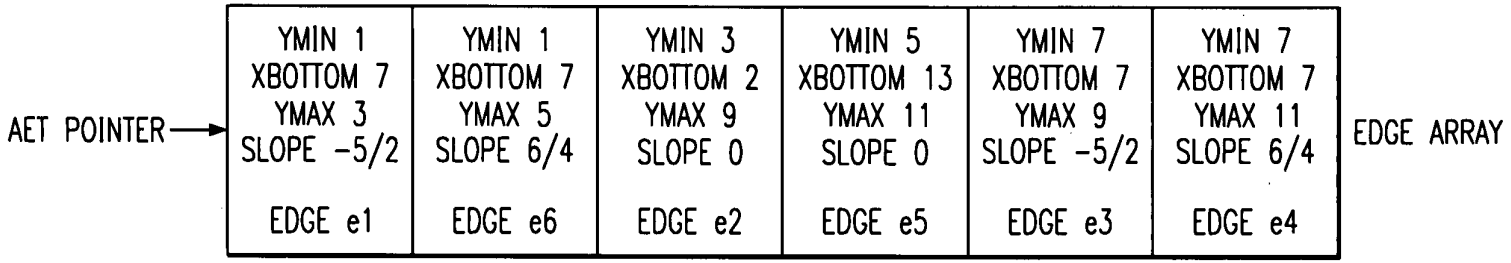


FIG. 11

FIG. 12a

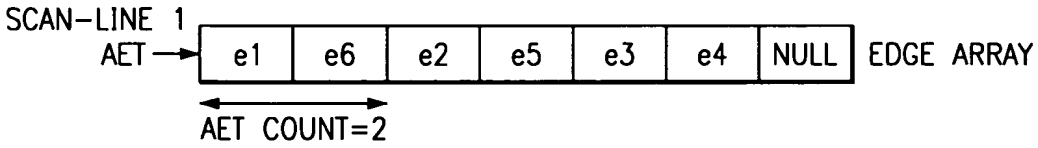


FIG. 12b

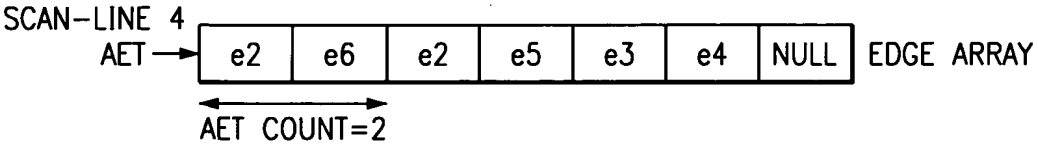


FIG. 12c

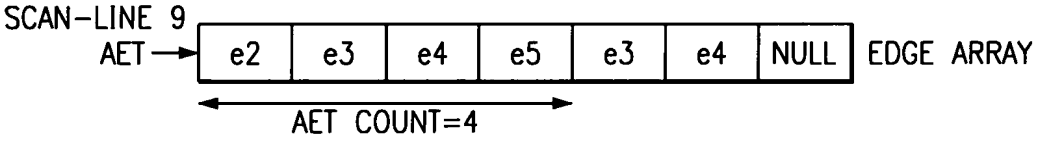


FIG. 13a
(PRIOR ART)

FIG. 13b
(PRIOR ART)

FIG. 13c
(PRIOR ART)

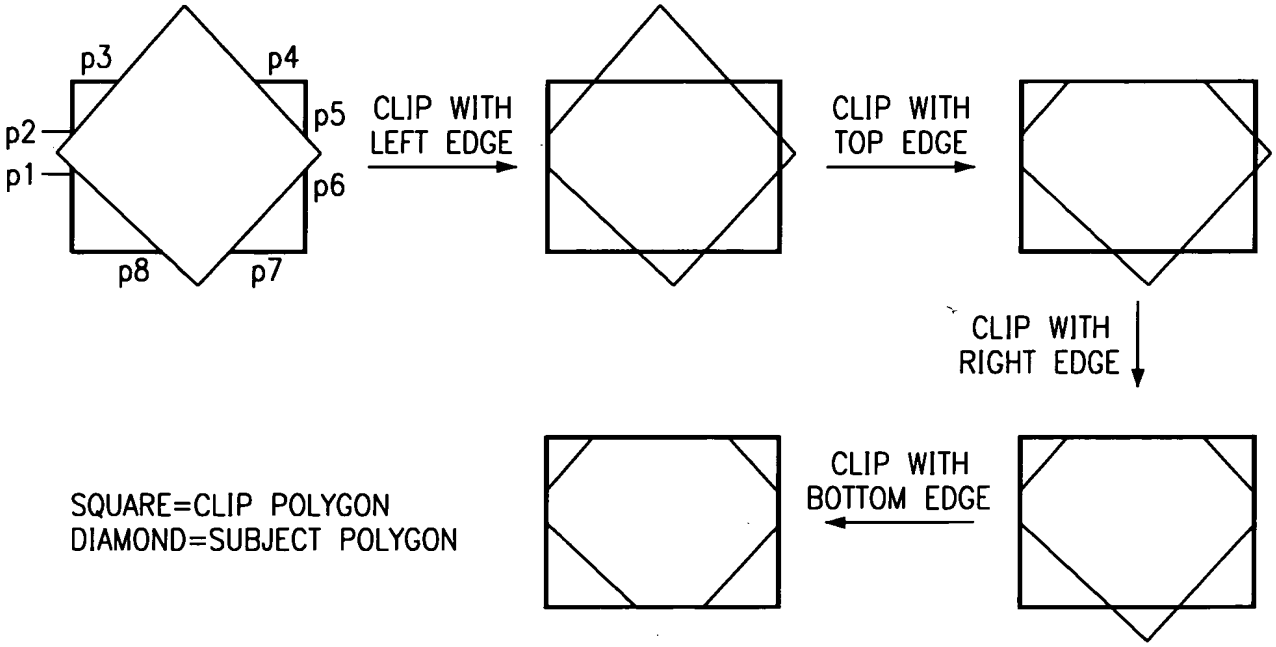


FIG. 13e
(PRIOR ART)

FIG. 13d
(PRIOR ART)

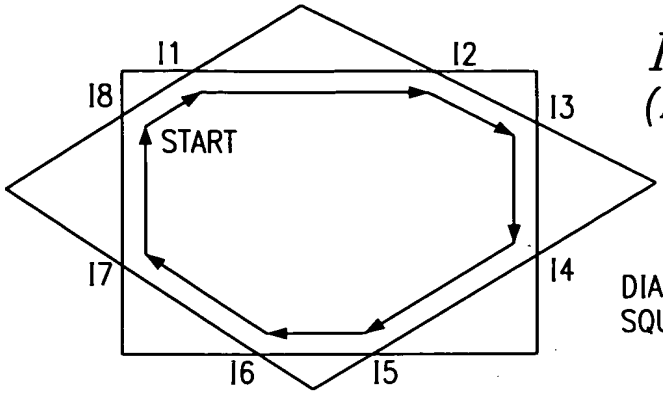


FIG. 14
(PRIOR ART)

DIAMOND=SUBJECT POLYGON
SQUARE=CLIP POLYGON

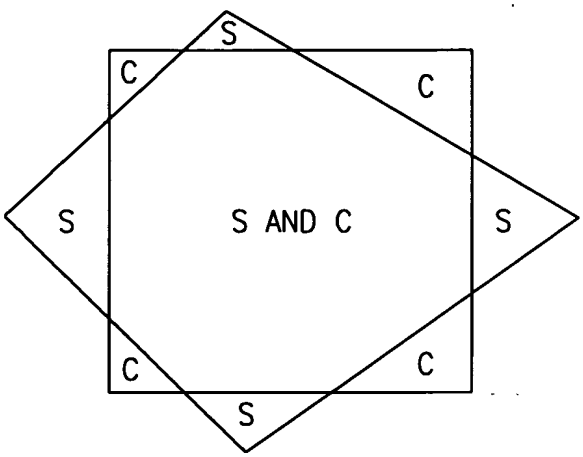


FIG. 15
(PRIOR ART)

S=SUBJECT POLYGON
C=CLIP POLYGON

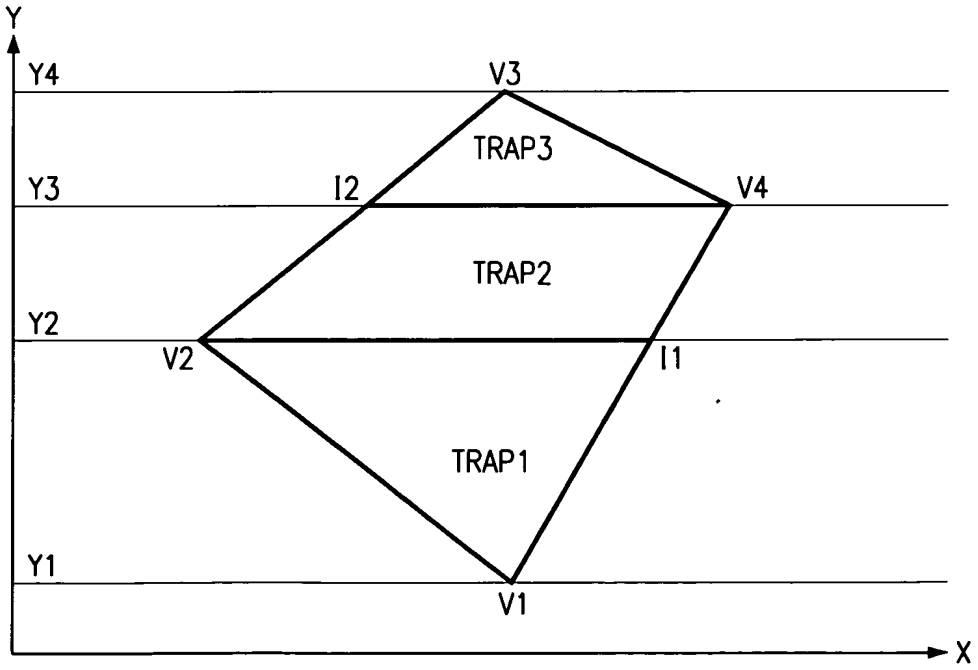


FIG. 16
(PRIOR ART)

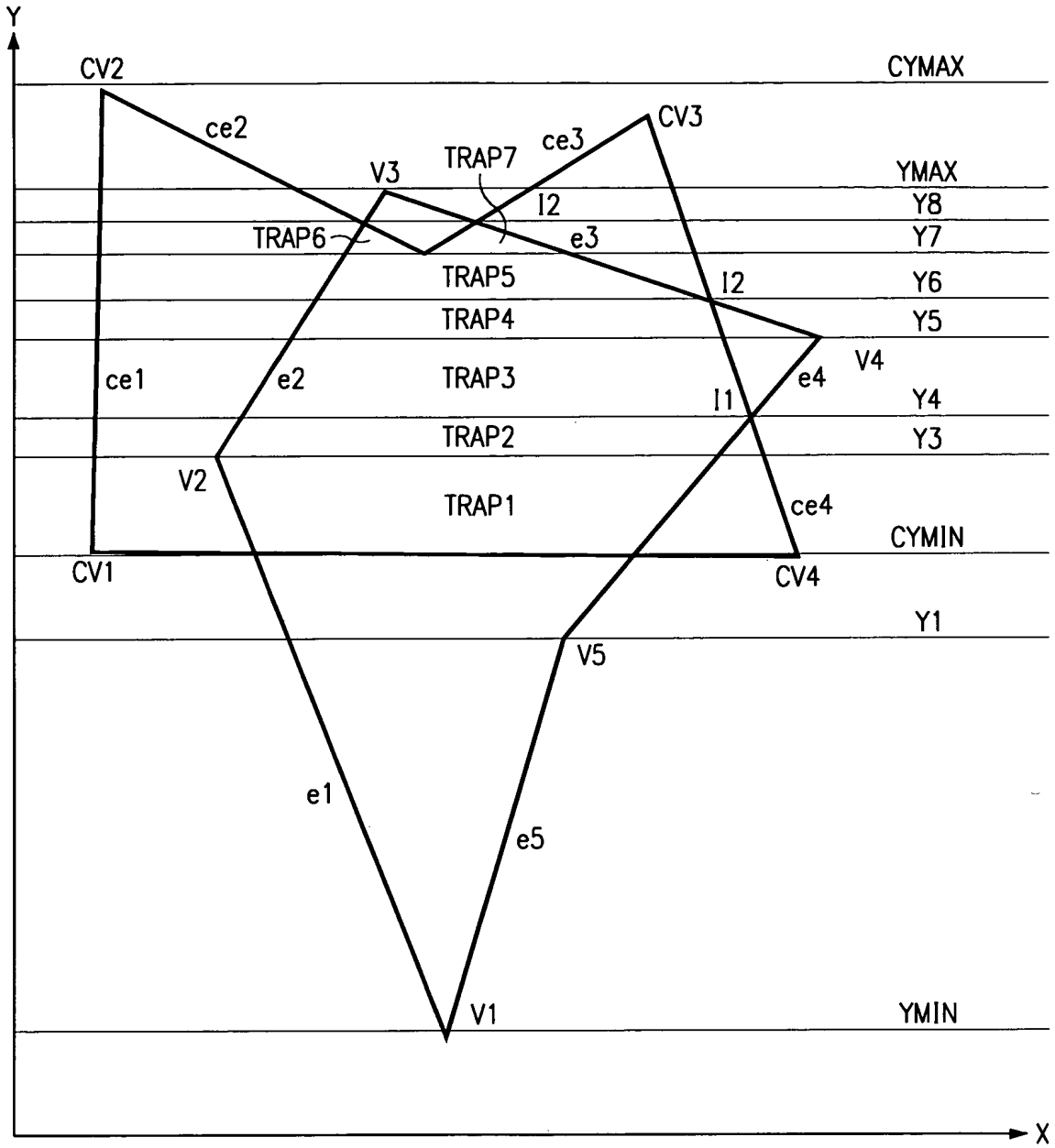


FIG. 17

CE1 x1	CE4 x2	AET OF CLIP POLYGON AT SCANLINE CYMIN

E1 x3	E4 x4	AET OF SUBJECT POLYGON AT SCANLINE CYMIN

x1,x2,x3,x4 XBOTTOM VALUES OF RESPECTIVE EDGES.

FROM FIGURE 17, x1<x3 AND x2>x4
xleft=MAXIMUM (x1,x3) i.e. EDGE E1
xright=MINIMUM (x2,x4) i.e. EDGE E4

FIG. 18

AETs AT SCANLINE Y7

ce1 xb1	ce2 xb2	ce3 xb3	ce4 xb4	

e2 xb5	e3 xb6	

xb1...xb6 ARE RESPECTIVE XBOTTOMS OF THE EDGES IN THE AETs

FROM FIGURE 17, xb1<xb5 AND xb4>xb6
xleft=MAXIMUM (xb1,xb5) i.e. EDGE ce1
xright=MINIMUM (xb2,xb6) i.e. EDGE ce2
SECOND TRAPEZOID IS POSSIBLE AS THE AETs DID NOT REACH THE END OF LIST
xleft=MINIMUM (xb3,xb6) i.e. EDGE ce3
xright=MINIMUM (xb4,xb6) i.e. EDGE e3

FIG. 19

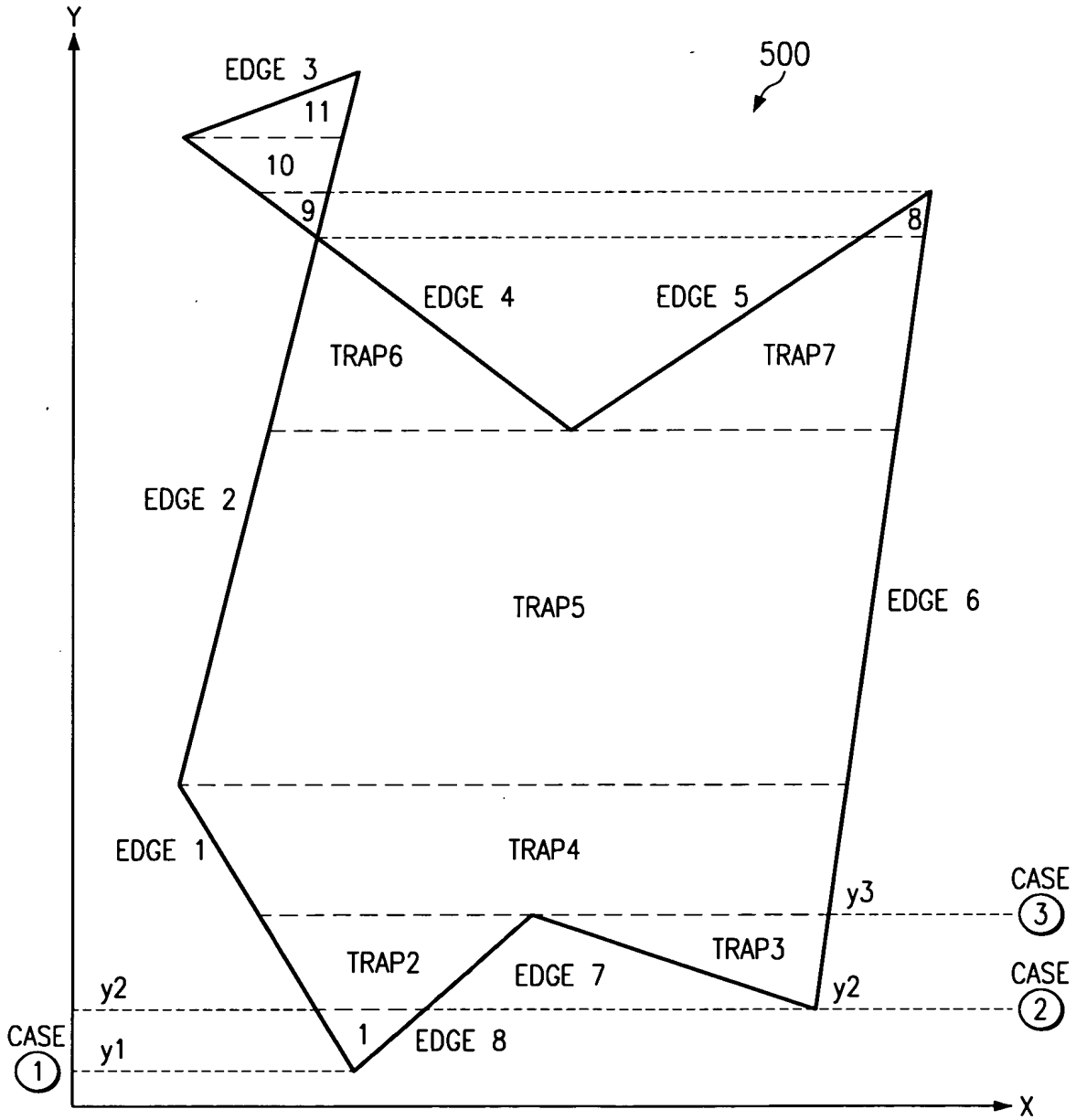


FIG. 20

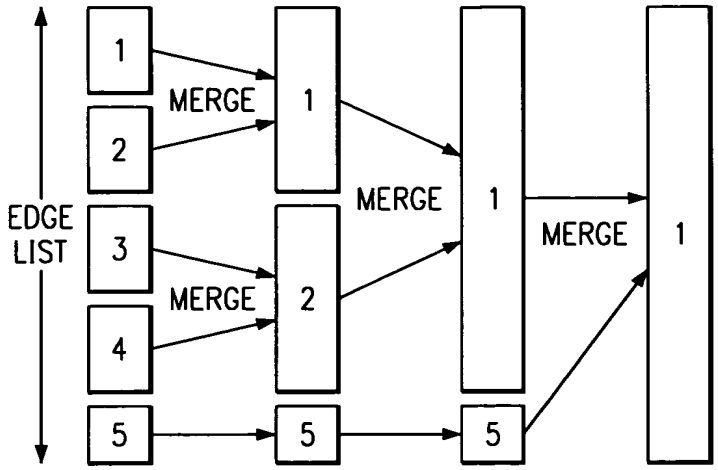


FIG. 21

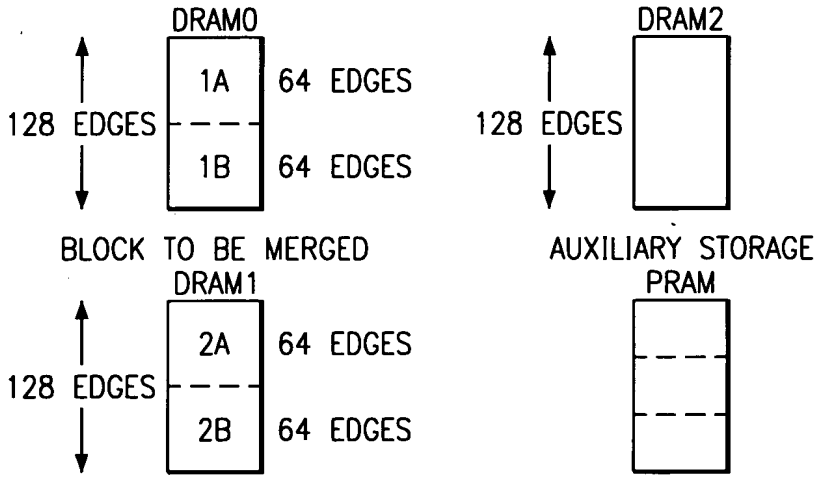


FIG. 22

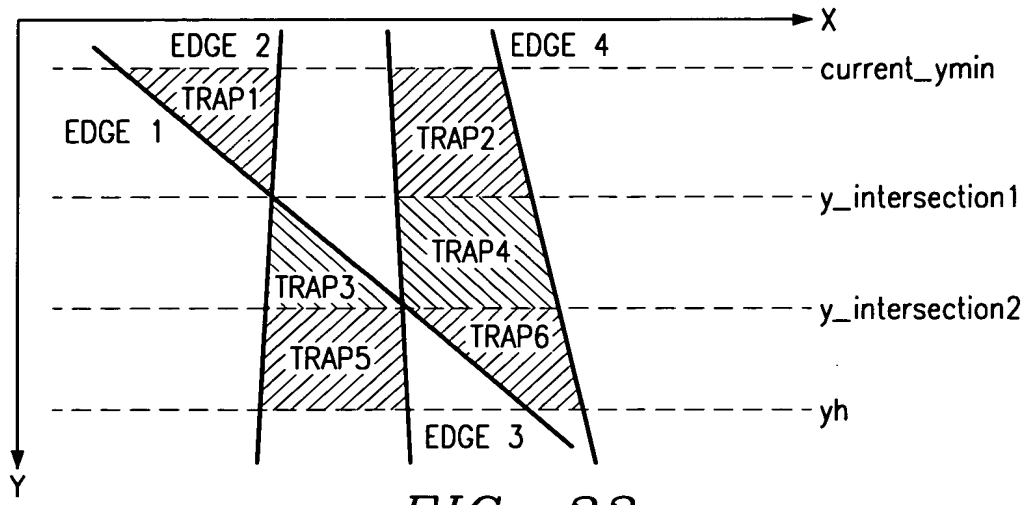


FIG. 23

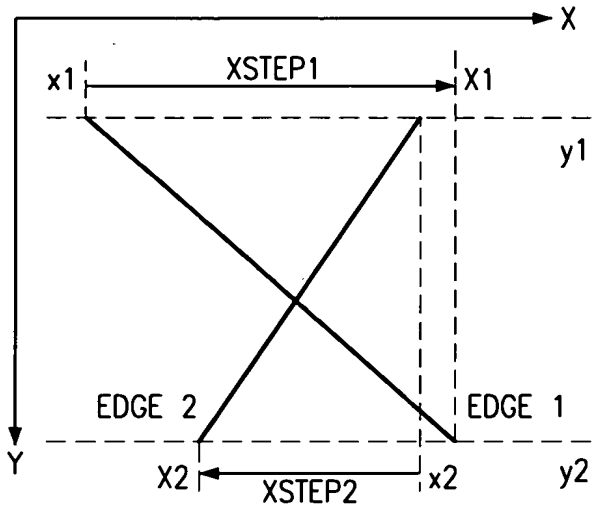


FIG. 24

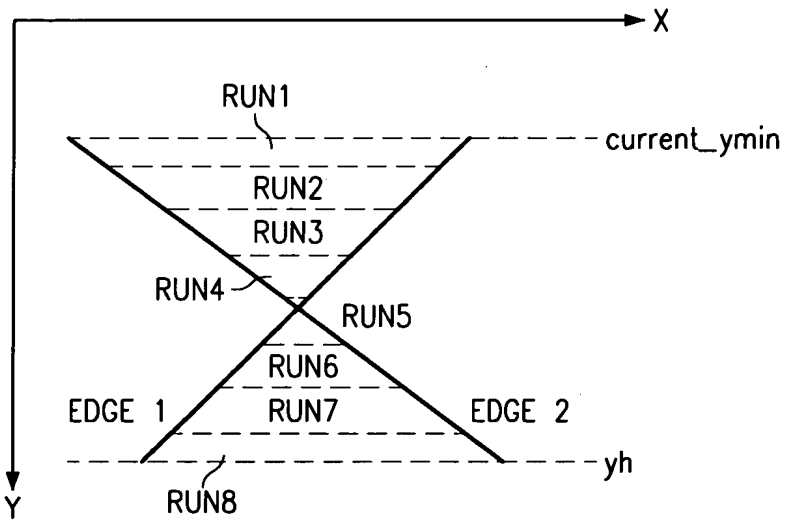
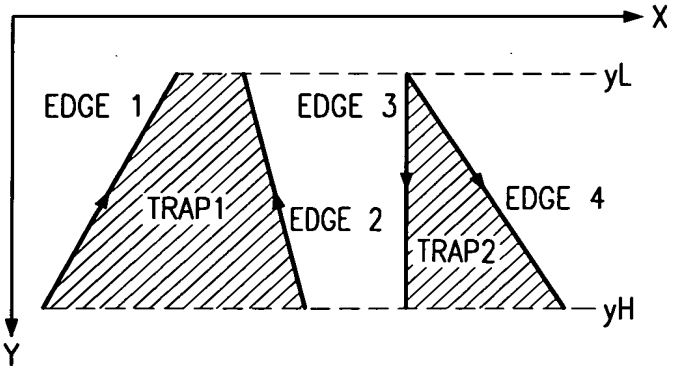


FIG. 25



AET(EDGE TABLE)	EDGE 1	EDGE 2	EDGE 3	EDGE 4

FIG. 26

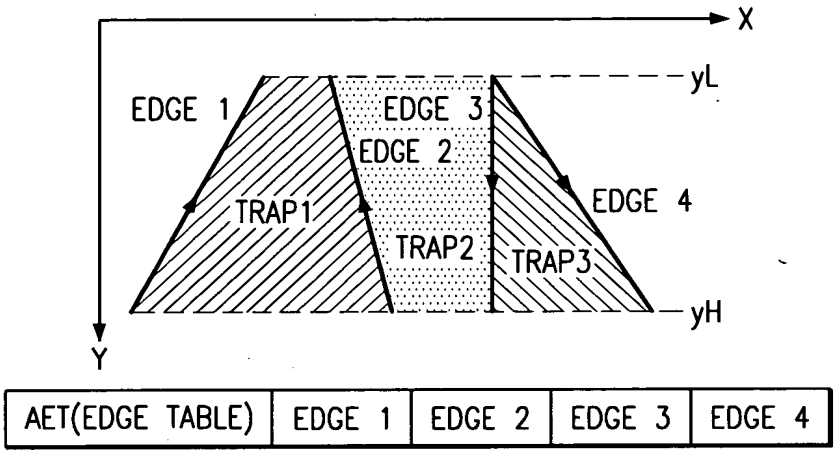

X
yL
EDGE 1
EDGE 3
EDGE 2
EDGE 4
TRAP1
TRAP2
TRAP3
yH
Y
AET(EDGE TABLE)
EDGE 1
EDGE 2
EDGE 3
EDGE 4

FIG. 27

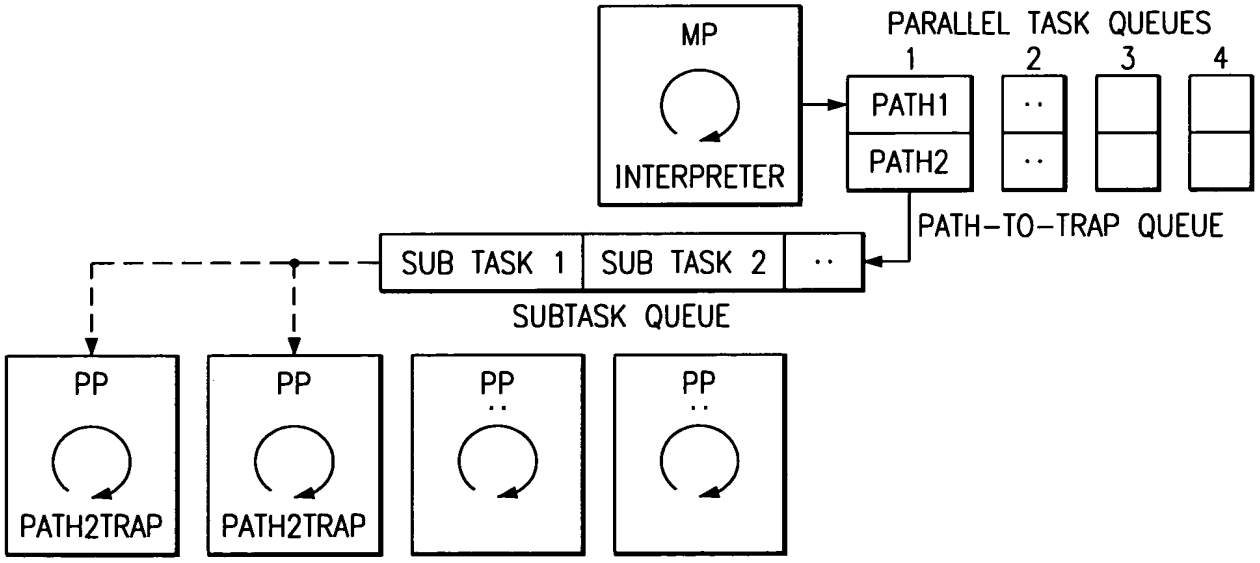

MP
INTERPRETER
PARALLEL TASK QUEUES
1
2
3
4
PATH1
PATH2
PATH-TO-TRAP QUEUE
SUB TASK 1
SUB TASK 2
SUBTASK QUEUE
PP
PATH2TRAP
PP
PATH2TRAP
PP
PP

FIG. 28